

=> d 111 1-2 abs,bib

L11 ANSWER 1 OF 2 USPATFULL on STN

AB An aerosol of a powder composed of helium carrier gas and particles of a hexagonal aluminum nitride is charged through a transfer pipe 3 into a film deposition chamber 4 whose interior is depressurized by gas evacuation using a vacuum pump 5 to maintain a degree of vacuum of 200-8000 Pa during supply of the carrier gas and the aerosol is blown from a nozzle 6 provided on the end of the transfer pipe 3 inside the film deposition chamber 4 to impinge on a substrate fastened to a substrate holder 7 to make the impact force of the particles at collision with the substrate 4 GPa or greater, thereby transforming the crystal structure of the aluminum nitride from hexagonal to cubic to deposit cubic aluminum nitride on the substrate. As a result, a method of transforming the crystal structure of a Group XIII nitride is provided that enables transformation of a Group XIII nitride to cubic crystal structure using a system of simpler configuration than that used for transforming the crystal structure of a Group XIII nitride by a static pressure application process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 2007:183884 USPATFULL

TI METHOD OF ALTERING CRYSTAL STRUCTURE OF
GROUP 13 ELEMENT NITRIDE, GROUP 13 ELEMENT NITRIDE AND STRUCTURE
MATERIAL CONTAINING CUBIC NITRIDE

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PI US 2007160872 A1 20070712

US 2008003458 A2 20080103

AI US 2004-549848 A1 20040319 (10)

WO 2004-JP3739 20040319

20060522 PCT 371 date

DT Utility

FS APPLICATION

LREP OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET,
ALEXANDRIA, VA, 22314, US

CLMN Number of Claims: 5

ECL Exemplary Claim: 1

DRWN 5 Drawing Page(s)

LN.CNT 469

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 2 OF 2 USPAT2 on STN

AB An aerosol of a powder composed of helium carrier gas and particles of a hexagonal aluminum nitride is charged through a transfer pipe 3 into a film deposition chamber 4 whose interior is depressurized by gas evacuation using a vacuum pump 5 to maintain a degree of vacuum of 200-8000 Pa during supply of the carrier gas and the aerosol is blown from a nozzle 6 provided on the end of the transfer pipe 3 inside the film deposition chamber 4 to impinge on a substrate fastened to a substrate holder 7 to make the impact force of the particles at collision with the substrate 4 GPa or greater, thereby transforming the crystal structure of the aluminum nitride from hexagonal to cubic to deposit cubic aluminum nitride on the substrate. As a result, a method of transforming the crystal structure of a

Group XIII nitride is provided that enables transformation of a Group XIII nitride to cubic crystal structure using a system of simpler configuration than that used for transforming the crystal structure of a Group XIII nitride by a static pressure application process.

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AN 2007:183884 USPAT2
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GROUP 13 ELEMENT NITRIDE, GROUP 13 ELEMENT NITRIDE AND STRUCTURE
MATERIAL CONTAINING CUBIC NITRIDE
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PI US 2008003458 A2 20080103
AI US 2006-549848 A1 20060522 (10)
PRAI JP 2003-77389 20030320
DT Utility
FS APPLICATION
LREP OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C., 1940 DUKE STREET,
ALEXANDRIA, VA, 22314, UNITED STATES
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 468
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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(FILE 'HOME' ENTERED AT 10:54:55 ON 14 APR 2008)

FILE 'HCAPLUS, INSPEC, JAPIO, USPATFULL, USPATOLD, USPAT2' ENTERED AT
10:55:25 ON 14 APR 2008

L1 22 S (GROUP(W)XIII) (8A) (NITRIDE(6A)CRYSTAL#)
L2 13693201 S (TRANSFORM? OR CHANG? OR ALTER? OR VARY?)
L3 1045400 S (CRYSTAL?(8A)STRUCTURE#)
L4 223 S (AEROSOL#) (8A) (MATERIAL(6A)POWDER#)
L5 38 S (BLOW? OR PUSH? OR EXPEL?) (8A) (AEROSOL(8A)SUBSTRATE#)
L6 47 S (DEPRESSUR?) (8A) (DEPOSIT?(6A)CHAMBER# OR DEPOSIT?(6A)VESSEL#)
L7 296131 S (HEXAGON?)
L8 5837 S (4(W)GPA)
L9 27 S (GROUP(W)XIII) (10A) (NITRIDE#)
L10 24 S L2 AND L9
L11 2 S L2 AND L3 AND L8 AND L9

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